146332

DATE: October 17, 2000
FROM: Bob Casper
RE: Matthiessen and Hegeler Zinc Co.- measurement of the contaminated soil area.

Using the Planix 5 Planimeter, the area contained by the area of contaminated soil was calculated for the Matthiessen and Hegeler Zinc Co. On October 17, 2000, the border of the contaminated soil was determined by connecting sample points X102, X103, X107/X108 and X109 and tracing the area with the planimeter. The area was taken from a 1988 aerial photograph showing the area of contaminated soil. The photo was taped down to prevent movement of the paper and four separate measurements were performed. The measurements resulted in one at 16.631533 sq. in., the second at 16.647033 sq. in., the third at 16.616033 sq. in. and the fourth at 16.631533 sq. in. The third measurement of 16.616033 sq. in. was used for further calculations because it was the lowest figure obtained.

A formula of A = D x N (squared) was supplied by the Planix 5 Planimeter owners manual. "A" is the area of the waste pile as illustrated by the boundary on the map. "D" is the displayed figure on the Planimeter (6.494512). "N" is the scale of the map (1 inch = 200 feet). One square inch on the map ("N" squared) equals 200 feet x 200 feet = 40,000 square feet.

When the values are inserted into the above formula (A = 16.616033 x 40,000 sq. ft.) an answer of 664,641.32 square feet was obtained for the waste pile. This figure was divided by 43,560 feet to obtain the area in acres of 15.26.